TRAINMASTER

S. A. LAMEY

ASSISTANT TRAINMASTER

.....

CHIEF DISPATCHER

L. FOSTER
Mexicali

SAN DIEGO AND ARIZONA EASTERN RAILWAY COMPANY

TIJUANA AND TECATE RAILWAY COMPANY

TIMETABLE

85

EFFECTIVE SUNDAY, MAY 28, 1950

AT 12:01 A.M.

PACIFIC STANDARD TIME

FOR THE GOVERNMENT AND INFORMATION OF EMPLOYES ONLY

H. R. GERNREICH
Vice President and General Manager

EASTWARD								WESTWARD			
	SECOND CLASS		FIRST CLASS					FIRST CLASS		SECOND CLASS	
Capacity of sidings		452 Freight		362 San Diego Passenger	Mile Post or Kilometer Post	Timetable No. 85 May 28, 1950	Distance from El Centro	363 San Diego Passenger		451 Freight	
		Leave Daily		Leave Daily		STATIONS		Arrive Daily		Arrive Daily	
				AM 7 05	0.0	R SAN DIEGO	148.1	PM s 11.30			
				7.07 AM	0.4	0.4 MARKET ST.	147.7	11.26 PM			
FIGURES SHOWN BETWEEN SAN DIEGO AND MARKET ST. ARE FOR INFORMATION ONLY. BE GOVERNED BY CURRENT TIMETABLE A. T. & S. F. RY.											
				AM 7.07	0.4	MARKET ST.	147.7	PM 11.26			
					0.7	0.3 FIRST ST.	147.4				
San Diego yard No. 1-45 BKWOYP		AM 7.30		7.09	1.1	TO-R 0.4 EIGHTH ST.	147.0	11.23		PM 4.15	
I					3.3	2.2 Naval Repair Base Crossing	144.8				
P		7.40		7.17	4.8	1.5 TWELFTH ST. Natl. City	143.3	11.15		4.01	
10 P		7.46		7.22	7.4	2.6 CHULA VISTA JCT.	140.7	11.10		3.55	
32 P		7.50		7.25	9.1	1.7 BOAL	139.0	11.07		3.51	
16 P		7.54		7.28	11.1	2.0 PALM CITY	137.0	11.04		3.45	
Yd. Limits 64 KP		8.04		s 7.35	15.5	TO-R 4.4 SAN YSIDRO	132.6	s 10.56		3.33	
46 P		s 8.14		s 7.40	K 0.1	R 0.7 TIJUANA	131.9	s 10.51		s 3.23	
28		8.19		7.45	K 4.1	2.3 AGUA CALIENTE	129.6	10.45		3.15	
40 WP		f 8.33		7.54	K 13.6	5.5 GARCIA	124.1	10.36		s 3.01	
27 P		f 8.41		8.01	K 19.2	3.5 MATANUCA	120.6	10.29		f 2.50	
40 WYP		f 9.01		8.18	K 33.9	9.1 REDONDO	111.5	10.14		f 2.25	
36 P		9.35		8.43	K 52.9	11.8 LA PUERTA	99.7	9.51		1.52	
Yard Limits 31 WP		s 10.01		s 8.58	K 59.9	TO-R 4.4 TECATE	95.3	s 9.43		s 1.40	
18 P		10.27		f 9.13	K 70.9	6.8 LINDERO	88.5	f 9.28		f 1.18	
12 P		10.29			60.3	0.7 DIVISION	87.8	9.27		1.16	
28 OP		10.52		s 9.26	65.8	TO 5.5 CAMPO	82.3	s 9.16		1.00	
28 WP		11.16		9.38	71.9	6.1 CLOVER FLAT	76.2	9.03		12.41	
28 P		AM 11.40		9.51	78.4	6.5 PUEBLO	69.7	8.48		12.25	
38 YP		PM 12.06		f 10.03	84.5	6.1 HIPASS	63.6	f 8.36		12.06 PM	
7 OWP		12.35		s 10.22	92.9	TO 8.4 JACUMBA	55.2	s 8.11		11.15 AM	
31 P		12.40		10.24	94.0	1.1 TITUS	54.2	8.07		11.09	
				f	96.0	2.0 DUBBERS	52.1	f			
15 P		1.10		10.46	100.7	4.7 CARRISO GORGE	47.4	7.45		10.46	
P		1.18		10.53	102.3	1.6 TUNNEL 15 SPUR	45.8	7.38		10.30	
64 WP		1.51		f 11.16	109.7	7.4 DOS CABEZAS	38.4	f 7.16		10.01	
30 P		2.16		11.31	117.7	8.0 SUGAR LOAF	30.4	6.56		9.17	
39 WOYP		2.31		f 11.39	122.5	4.8 COYOTE WELLS	25.6	f 6.44		8.55	
Yard Limits 67 P		3.00		AM f 11.50	130.0	TO 7.5 PLASTER CITY	18.1	s 6.33		8.40	
56 P		3.30		PM f 12.05	139.8	9.8 SEELEY	8.3	f 6.18		8.20	
12		3.42		12.13	145.1	5.3 WILSIE	3.0	6.10		8.07	
Yard Limits BKWYP		3.50 PM		s 12.20 PM	148.1	TO-R 3.0 EL CENTRO	0.0	6.05 PM		8.00 AM	
		Arrive Daily		Arrive Daily		(148.1)		Leave Daily		Leave Daily	
		(8.20) 17.64		(5.13) 28.31		.....Time over District..... .....Average Speed per Hour.....		(5.21) 27.60		(8.15) 17.81	

S. D. & A. E. Ry. / T. & T. Ry. / S. D. & A. E. Ry.

No. 363 stop on flag at Mills Crossing.

Nos. 362, 363, 451 and 452 use SP main track between junction switch and SP station, El Centro, moving with caution. Schedule time and train orders for SD&AE trains apply at train-order signal.

Nos. 451 and 452 will operate as Mixed trains between Tijuana and Lindero, and handle passengers between those points only.

Nos. 362 and 363 reduce speed to 10 MPH, or stop when necessary, at Mills Crossing and Plaster City to exchange U. S. Mail.

Timetable No. 85

May 28, 1950

EAST-WARD ↓

Capacity of sidings	Mile Post Location	STATIONS		Distance from K St. (Chula Vista)
San Diego yard	4.8	TWELFTH ST. Natl. City		4.8
		0.9		
	5.7	24th ST. Natl. City		3.9
		1.4		
	7.1	POTASH		2.5
		0.3		
	7.4	F STREET JCT.		2.2
		0.2		
	7.6	CHULA VISTA JCT.		2.0
		0.9		
	8.5	TO	CHULA VISTA	1.1
		1.1		
	9.6	K St. Chula Vista		0.0

WEST-WARD ↑

(4.8)

Timetable No. 85

May 28, 1950

EAST-WARD ↓

Capacity of sidings	Mile Post Location	STATIONS	Distance from North Island
San Diego yard	7.4	F STREET JCT.	13.9
		2.5	
18	9.9	SALT WORKS	11.4
		2.4	
	12.2	FORT EMORY	9.0
		6.0	
9	18.3	TENT CITY	3.0
		2.4	
	20.7	CORONADO	0.6
		0.6	
Yard Limits	21.3	NORTH ISLAND	0.0

WEST-WARD ↑

(13.9)

Note: Navy tracks used beyond MP 21.3.

ADDITIONAL STATIONS			
NAME		Mile Post	Capacity
Linen	(Spur)	9.5	16
Standard	(Spur)	K 5.9	4
Barrett	(Spur)	67.1	16
Clover Flat Pit	(Spur)	74.4	17
Mills Crossing		83.5	
Edgar	(Spur)	137.1	6

Timetable No. 85

May 28, 1950

EAST-WARD ↓

Capacity of sidings	Mile Post Location	STATIONS		Distance from El Cajon
San Diego yard	BKWOYP	1.1	TO-R EIGHTH ST.	15.7
		3.6		
	10	4.7	CHOLLAS	12.1
		5.7		
3		10.4	LEMON GROVE	6.4
		1.9		
20		12.3	LA MESA	4.5
		3.0		
6		15.3	GROSSMONT	1.5
		1.5		
15		16.8	EL CAJON	0.0

WEST-WARD ↑

(15.7)

RULE A. All, or portions of, the following rules have been changed. Pasters have been printed covering these changes, and employes must have the pasters in their copy of Book of Rules:

Rules	10(H)	295
	15	297
	26	705
	99	707
	104(D)	708
	210	763
	221	837
	271	

Definition of FIXED SIGNAL is changed to read as follows:

"A signal of fixed location indicating a condition affecting the movement of a train, such as train-order, automatic, interlocking or absolute signal; switch, stop boards, yard limit boards or speed boards."

RULE M. Employes are warned that it is dangerous to ride on top or side of cars while passing points where impaired clearance exists, and that they must protect themselves from injury. See list of impaired clearances on main track and siding.

There are numerous other structures with impaired clearance on yard and station tracks on the division, and employes must be familiar with their location and avoid personal injury.

RULES 1 (A), 2 (A), 3 (A) and 3 (B) are cancelled, and Rules 1, 2, and 3 are manded as follows:

"**RULE 1.** Standard time, obtained from an authorized observatory, will be transmitted by telegraph daily except Sundays and holidays. Clocks bearing the prescribed sign 'Standard Clock' will be maintained at designated places, as shown in timetable, and employes charged with the duty of receiving time signal must set standard clock to agree with time signal and make record on prescribed form of any variation.

"At enginehouses and other locations of standard clocks where time signal is not received, employe in charge of standard clock must obtain correct time from nearest train-order operator by telephone, during, or after, transmittal of time signal, and set the clock."

"**RULE 2.** Each of the following employes, and such other employes as may be designated, must carry, while on duty, a reliable railroad grade watch, and must carry a watch certificate, Form CS-2821, which must be presented to an authorized watch inspector for renewal during the month of November of each year:

*Train-Order Operators
*Except when assigned in offices where a standard clock is located.
Conductors
Brakemen
Engineers
Firemen
Outside Hostlers
Footboard Yardmasters
Yard-Engine Foremen
Yardmen
Herders

"Employes must show their watches and certificates to division officers, authorized watch inspectors and traveling watch inspectors upon request."

"**RULE 3.** Conductors, yard-engine foremen, engineers and outside hostlers must compare their watches with a standard clock, and conductors and yard-engine foremen must compare time with their engineers, when commencing each day's work; and conductors must compare time with their brakemen, yard-engine foremen with their yardmen, and engineers with their firemen, as soon thereafter as practicable.

"The time when watch is compared with standard clock, and any variation of such watch, if not set to correct time, must be recorded on prescribed form.

"When an additional engine is added to a train en route, engineer of that engine must compare time with the conductor or an engineer of the train.

"When conductors and engineers tie up at a point where there is no standard clock, time must be compared with train-order operator on duty when commencing each day's work. If this cannot be done, time must be compared with conductor or engineer of first available train.

"At train-order offices where there is no standard clock, train-order operators must, during each tour of duty, compare time with time signal if possible, otherwise with a train-order operator where standard clock is maintained, or time signal is received.

"Watches must be set to correct time if they reflect a variation of more than twenty seconds from correct time when comparison is made as prescribed in this rule."

RULE 10 (H) is changed to read: "Yellow signal must be placed one-fourth mile from structure," instead of three-fourths mile.

RULE 10 (J) is revised to read as follows:

"Speed boards will be located to the right of track in direction of approach where practicable, except on double track where trains keep to the left, they will be located to the left if proximity of adjoining main track prevents location to the right.

"Speed boards that prescribe reduction in speed will be located one-fourth mile from initial point of restriction. Speed boards that authorize an increase in speed will be located at the point where higher speed is permissible, and speed may be increased accordingly as soon as rear of train has passed the speed board.

(no change in Figs. 1, 2 and 3)

"The higher number on speed board indicates the maximum speed of trains consisting entirely of passenger equipment, and the lower number indicates the maximum speed of all other trains. Where but one number is shown it indicates the maximum speed of all trains."

Speed boards prescribing an increase in speed will not be installed. Speed Restrictions tables will indicate permissible speeds between mile post locations named.

RULE 15 first and second paragraphs are changed to read:

"The explosion of one torpedo is a signal to stop. When an unattended torpedo is exploded, train, after stopping, may proceed with caution to a point not less than one-fourth mile from point where torpedo was exploded.

"The explosion of two torpedoes is a signal to proceed with caution for not less than one-half mile."

RULE 19. Classification lamps on rear of DERS class engines will be considered as marker lamps by day or by night only when such lamps are lighted.

RULE 21 (D) will not apply to SP engines.

RULE 30. Engine bell must be rung continuously between the following points:

San Diego and Kilometer 7; Garcia and east end of Tunnel 2; Tecate and Campo; MP 96 and MP 106; Eighth St. and Mount Hope Cemetery.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction.

RULE 82 (A). Clearance and necessary train-orders for trains originating San Diego will be delivered to engineer as the engine passes Eighth St., en route San Diego.

RULE 83 (B). First-class trains may register by ticket at Eighth St.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following stations:

West MP		East MP
	San Diego	4.8
	" (Coronado Subdivision)	7.4
	" (La Mesa Subdivision)	4.7
14.5	San Ysidro-Agua Caliente	K5.1
K58.9	Tecate	K62.2
128.5	Plaster City	131.9
147.2	El Centro	
21.3	North Island (Coronado Subdivision)	

Yard limit boards on T&TRy. read "Patio Limite."

RULE 98. RAILROAD CROSSINGS NOT INTERLOCKED: At following grade crossings trains will stop not nearer than 50 feet nor farther than 500 feet from crossing and will proceed only on signal from flagman:

Crossing at Chula Vista. Exception—Carriso Gorge Subdivision trains will expect to find the main track blocked and will pass over the crossing not to exceed 15 MPH.

RULE 99. Third and fourth paragraphs are changed to read:

"If recalled from a point less than one-fourth mile from rear of his train, he must, if safety to train requires, leave lighted fusee at proper intervals and, if conditions warrant, also place two torpedoes on the rail three rail-lengths apart.

"If not recalled, one-fourth mile from rear of train he must place one torpedo on the rail; one-half mile from rear of train, or when recalled, if one-fourth mile or more from rear of train, he must place two torpedoes on the rail three rail-lengths apart." (rest of paragraph unchanged.)

RULE 103 (A). Switching movements across Fifth Ave., San Diego, must be protected by flagman.

Movements on Richfield Oil spur across Harbor Drive (Colton Ave.) San Diego, must be protected by flagman.

Movements on Navy spur across Eighth St. National City, must be protected by flagman account spur not connected to crossing signals.

At Fourth Ave., and at sidewalk on Third Ave. near Park Way, Chula Vista, stop and be preceded over crossing by flagman.

Movements on Fort Emory spur across State Highway must be protected by flagman.

Boulevard stops at Fourth St., Pomona Ave. and Orange Ave., Coronado, do not apply to trains.

Movements on Navy spur across Harbor Drive, foot of 13th St., National City, must be protected by flagman account crossing signals not connected to this track.

At La Mesa Blvd., La Mesa, stop and be preceded over crossing by flagman.

RULE 104. The normal position of junction switches at Twelfth St., National City and Chula Vista Jct. is for the San Diego-El Centro main track.

RULE 105. Capacity of Sidings column indicates the number of cars of average length of 49 feet that siding will hold between fouling points, in addition to one steam engine and caboose.

Track No. 1 in classification yard is siding for Eighth St.

First crossover switch west of San Ysidro station is initial switch for westward trains; and west switch at west end of yard is initial switch for eastward trains.

East switch of siding Tijuana is initial switch for westward trains; and west crossover switch is initial switch for eastward trains.

RULE 221. Trains must obtain clearance before leaving:

Eighth St. ..... Eastward trains.
San Ysidro, Tecate ..... All trains.

Last paragraph is changed to read as follows:

"When light is not displayed in a train-order signal at night, day indication of the signal arm will govern, and report must be made from next open office, unless special instructions provide that light will not be displayed."

AUTOMATIC BLOCK SIGNALS

RULE 505. When Signals No. 1022 and No. 1023 are in stop position, train shall stop and then proceed immediately with caution to Bridge No. 102-A, and await arrival of motor car patrolman following train, who will inspect bridge and authorize train to proceed if safe to do so.

RULE 535. Spring switches not equipped with facing point locks are located as follows, and speed indicated in Speed Restrictions table must not be exceeded while passing over them in facing movement, or in trailing through them:

Location	Normal Position
Eighth St. ..... Enginehouse lead	Main track

Spring switches are also located on other tracks as follows:

Stem switch on wye at Eighth St., two on enginehouse lead, and five on enginehouse tracks at Eighth St.

When a spring switch is hand thrown, trainman so setting same must again set it for normal position after movement has been completed, unless he has arranged for another trainman to do so.

AUTOMATIC INTERLOCKING

Naval Repair Base Crossing, MP 3.3

Limits extend from home signal 450 feet west of crossing to home signal 450 feet east of crossing. Derails on Navy track only. Normal signal indication proceed for SD&AERy.

Trains and engines must not exceed 20 MPH between home signals.

If signal indicates "stop" observe Rule 663 and proceed. If signal indicates "stop" and not attended by trainman or operator on Navy track, and signal does not clear when train enters interlocking limits, make report from next train-order office.

GENERAL REGULATIONS

RULE 825. When necessary to cut crossing and a distance of 100 feet on each side cannot be provided, a flagman must protect. Cars must not be left in any position that would in any way intercept the view of an autoist or pedestrian of an approaching train unless crossing is protected as stated above.

When cars are left on grade not protected with derail they must be chained to the rail.

Cars must not be cut off train on grade, depending on hand brakes or air brakes to hold them, but must be placed with the engine.

Fifth paragraph applies to wooden outfit cars the same as to other cars, except that diner should not be separated from kitchen car.

RULE 826. When a sign reading "Occupied Outfit Cars" is attached to switch lock, the outfit cars must not be coupled to, nor moved, until occupants have been notified, and permission given by foreman or his representative.

RULE 827. Unless otherwise provided, when conditions are favorable and in the judgment of conductor it is safe, freight trains need not stop for train inspection. Where stops are made for other reasons, inspection of trains must be made as often as practicable. When weather conditions restrict visibility, or other conditions require, conductor will designate stops for inspection which in his judgment are necessary.

Westward freight and mixed trains will stop not less than five minutes at Clover Flat or Campo and Tecate for cooling of wheels and inspection.

Eastward freight and mixed trains will stop not less than five minutes at Jacumba, Culvert 106.71, Sugar Loaf and Coyote Wells for cooling of wheels and inspection.

Engines running light on descending grade must stop for inspection at freight train inspection points, a sufficient length of time for engineer to assure himself that tires and machinery are in satisfactory condition.

On freight and mixed trains between Garcia and Matanuca, and on descending grades between Redondo and Coyote Wells, a member of crew must observe track to rear of train for evidence of derailment or any other condition requiring immediate stopping of train.

Trains, including military trains, made up in part of freight cars or caboose equipped with cast iron wheels are required to comply with rules and timetable instructions applying to freight trains as they relate to stopping for train inspection, and speed restrictions.

Cars bearing placards denoting contents are explosive, inflammable, poisonous, or otherwise dangerous, must be given careful inspection at all points where train inspection is made.

RULE 828 is revised to read as follows:

"Speed of freight trains must not exceed eight miles per hour for a distance sufficient to permit running inspection when starting. Trainmen must closely watch to see that brakes are released, and if necessary must signal enginemen to stop if wheels are found sliding. Conductor must promptly mail to the Superintendent a report of flat wheels discovered under cars in his train."

RULE 831. Second paragraph is changed to read:

"Women and children must not be permitted to ride in outfit cars when moved by freight train. Other occupants of outfit cars must remain inside and not ride on top, sides or between these and other cars during course of road or yard movements."

RULE 833. Whenever practicable locomotive cranes, or cranes of similar type must be handled in trains with heavy end forward.

Cranes or machines with rotating body, loaded on open cars, must not be moved until inspected and released by mechanical department. Conductors must not move Jordan Spreaders, except when in use, unless wings are protected against spreading by chain or tie bar extending from wing to wing and wing arm to wing arm.

RULE 836. Cars moved from one station to another ahead of engine on descending grade must be chained to the engine. Switching movements on descending grade must be protected by a derail. When practicable, engine must be kept on lower end of cars.

RULE 869 is cancelled.

RULE 878. Engine flues must be sanded eastward approaching Hipass, westward when approaching Culvert 106.71.

Engine flues must not be sanded while passing places where damage from fire might result.

AIR BRAKE RULES

RULE 17. All retainers on freight and passenger trains must be used: Eastward Hipass to Jacumba, Culvert 106.71 to Coyote Wells.

RULE 25. When helper engines are in trains, after a rear end test has been made, the leading engine must not attempt to start until the helper engine has whistled off. The helper engine must not whistle off until receiving signal from the rear, which will not be given before the air pressure on caboose gauge indicates seventy (70) pounds.

Rear end test must be made by all freight and mixed trains at Mills Crossing or Hipass.

Rear end test must be made by eastward freight and mixed trains at Culvert 106.71.

Air must be cut in when handling cars on Commercial St. between 13th St. and 32nd St., San Diego.

RULE 33. Gross tonnage of any freight train must not exceed the following number of Ms per operative brake between the stations shown:

Hipass and Coyote Wells.....120 Ms

RULE 39. Running test must be made by passenger trains at Hipass.

Air brakes on two adjoining cars must not be cut out leaving any station where cars can be separated.

MISCELLANEOUS

Steam engines heavier than C class (200,000 pounds on drivers) are not permitted to operate on SD&AERy.

When pushing trains out of yards engine will not be placed behind wooden underframe equipment.

Helper engine or engines in Freight and Mixed Trains will be handled as follows:

EASTWARD between Redondo and Hipass: Helper or helpers must be cut in train so that one half of tonnage to be handled by helpers will be behind them.

WESTWARD between Coyote Wells and Hipass: When only one helper engine, this engine to be handled on head end of train. When two helpers, they must be cut in train so that one half of tonnage to be handled by helpers will be behind them.

Avoid taking water at emergency water stations at Redondo and Dos Cabezas. If necessary to take water, take only enough to reach next unrestricted water station.

Eastward trains and light engines have sufficient water in tank at Jacumba to make Calexico.

Eastward helpers making turn at Coyote Wells take full tank of water at Jacumba.

Engines weighing over 145,000 pounds on drivers are not permitted to operate between Twelfth St., National City and K St., Chula Vista; between F St. Junction and North Island, and between Eighth St. and El Cajon.

Load limit (car and contents):

San Diego-El Centro	200,000 pounds
National City-Chula Vista	169,000 pounds
San Diego-North Island	169,000 pounds
San Diego-El Cajon	169,000 pounds

Unless authorized by General Manager, heavier loads must not be handled.

Employes of the SD&AERy., while performing service on tracks of the SP at or between El Centro and Calexico, are under jurisdiction of the officers and will be governed by Rules and Regulations of the Transportation Department, timetable and bulletins of the SP.

INTERNATIONAL BOUNDARY

Trains approaching gate at International Boundary, San Ysidro, will sound one long blast of whistle to inform Government Officials of their presence. If prompt reponse is not gained after whistle blast, an employe will go at once to Government Headquarters and request service.

Trains will stop before crossing the International Boundary line at San Ysidro. Trains in both directions when not accompanied by Customs Immigration Rider will stop at Campo. Trains in both directions will stop at Tecate. Trains must not cross International Boundary line without first notifying Customs and Immigration Officers and obtaining necessary permission from them.

Westward trains coming into Tijuana, when not accompanied by rider, will proceed without stopping to Boundary line for inspection by officers of the Mexican Government, after which cars for Tijuana may be set out and necessary switching performed. Mixed trains will also stop passenger equipment at depot when passengers are handled.

Trains carrying passengers will not stop between Lindero and Campo stations except in cases of emergency.

STRUCTURES LESS THAN STANDARD CLEARANCE

Ice dock Boal is equipped with aprons which must be raised and secured before moving cars on adjoining track.

Pipe and counter-weights on Malt Plant, Tecate.

On Brewery spur, Tecate, pilaster at northwest corner of Malt building will not clear man on side of car, and pipes over track 30 ft. from east end will not clear man on top of car. Overhead wires will not clear man on top of car.

Corrugated iron shed north side of Oil spur, Tecate, back of station, and car puller at mill on same track will not clear man on side of car.

Fire Hydrant on Fourth Ave., at K St., San Diego.

Fire hydrant, power poles and street lights along east curb line of Fifth Ave., San Diego.

Union Oil Co. spur tracks, San Diego.

Sperry Flour Co. spur, San Diego.

Overhead highway bridge between Grossmont and El Cajon.

Gypsum chutes along track 4 of U. S. Gypsum Co., when in loading position.

INSTRUCTIONS IN CASE OF FIRE

1. FIRE FIGHTING EQUIPMENT:

(a) Five gallon fire extinguishers are located at following points:

West end Tunnel 1	East end Tunnel 13
West end Tunnel 2	West end Tunnel 14
West end Tunnel 3	West end Tunnel 15
East end Tunnel 3½	West end Tunnel 16
East end Tunnel 4	East end Tunnel 17
West end Tunnel 5	West end Tunnel 18
West end Bridge 97-C	West end Bridge 104-A
East end Tunnel 6	West end Bridge 104-B
Both ends Tunnel 8	West end Tunnel 19
West end Tunnel 10	West end Tunnel 20
West end Tunnel 11	West end Tunnel 21
West end Tunnel 12	

Note:—Fire extinguishers at tunnels are located just inside tunnel portals.

(b) Connections for portable phones in Carriso Gorge are located at following points:

Near West end Tunnel 5	Near both ends Tunnel 14
East end Tunnel 6	West end Tunnel 15
West end abandoned Tunnel 7	East end Tunnel 16
Both ends Tunnel 8	West end Tunnel 17
West end Tunnel 9	West end Tunnel 18
West end Tunnel 10	West end Tunnel 19
East end Tunnel 12	West end Tunnel 20
East end Tunnel 13	West end Tunnel 21

There are telephones at the east end of Tunnel 11 and at the east end of Bridge 102-A.

These connections are provided for emergency service only and anyone using them in an attempt to get help must, after his call has been placed, DISCONNECT HIS PORTABLE PHONE so that operator can call camps. Failure to disconnect phone will interfere with calling circuit.

(c) Fire Hose and connections on Engines:

Engines No. 27, 102, 2352, 2357, 2360, 2362, 2370, 2373, 2383 and 2384 are equipped with fire hose connections on feed water line between the injector and the check valve. On the deck of the tender of these engines there is a hose reel holding 100 feet of fire hoze with nozzle attached. When using hose, be sure to close valve ahead of the check valve before opening valve on the fire hose connection. This will prevent hot water backing up into hose line in case check valve fails to seat.

Other engines not equipped with hose connections, if location of fire permits, will get Tank Car at Tunnel 15 spur and move it to fire, using equipment mounted on tank.

(d) Tank Car MW 1001:

Tank Car MW 1001 with 10,000 gallons of water is kept first out at Tunnel 15 spur. On deck over top of tank is mounted a steam pump, 300 feet of fire hose on a reel, and a tool box containing fire-fighting tools and fittings. Car is equipped with headlights on each end, and extension cord to be plugged into socket in cab of engine is kept in tool box. Steam line to pump is fitted with steam hose connection at each end of car, so that pump may be operated from either end of engine or train, and by either steam or air. A length of steam hose and fittings are kept in tool box of tank car to make connections. When pump is run by air, automatic brake valve on engine should be held in Full Release position to increase volume of air.

2. INSTRUCTIONS:

(a) Rear brakeman and fireman on eastward trains will keep a sharp lookout after passing Tunnel 15 spur and be prepared to accept stop signal from Tunnel Guard.

(b) Steam hose must be coupled and steam cut through to rear of passenger trains at all times regardless of weather conditions. This in order to handle fire-fighting car at Tunnel 15 spur at rear of train.

(c) Trains discovering a fire should immediately call operator so other equipment can be dispatched to the fire. Every effort should be made to extinguish the fire with the equipment on the engine and tender. If it is evident that fire cannot be put out with equipment at hand, or if engine is not equipped with fire hose, and it is possible to reach tank car at Tunnel 15 spur, get that car and return it to the fire while there is sufficient water left in the tender to make the round trip. Tank car should be picked up so that it will be headed into the fire ahead of engine or train. Stake and pinch bar are included with tools on deck of tank car.

Tunnels and bridges in some places are located so close together that a fire may spread to another structure. While it might not be possible to extinguish the fire in one structure, equipment should stand by to prevent fire from spreading.

Employes will use their best judgment in meeting an emergency and act in the safest and quickest way to meet the conditions.

(d) Tank Car MW 1001 must always be left, filled and first out at Tunnel 15 spur.

SPEED TABLE

Speed per Hour	1 Mile in Min. Sec.	1 Kilometer in Min. Sec.	Speed per Hour	1 Mile in Min. Sec.	1 Kilometer in Min. Sec.	Speed per Hour	1 Mile in Min. Sec.	1 Kilometer in Min. Sec.	Speed per Hour	1 Mile in Min. Sec.	1 Kilometer in Min. Sec.
6	10.00	6.13	21	2.51	1.46	31	1.56	1.12	41	1.27	0.54
8	7.30	4.40	22	2.43	1.41	32	1.52	1.10	42	1.25	0.53
10	6.00	3.44	23	2.36	1.37	33	1.49	1.08	43	1.23	0.52
12	5.00	3.06	24	2.30	1.33	34	1.45	1.05	44	1.21	0.51
15	4.00	2.29	25	2.24	1.29	35	1.42	1.03	45	1.20	0.50
16	3.45	2.20	26	2.18	1.26	36	1.40	1.02	46	1.18	0.48
17	3.31	2.11	27	2.13	1.23	37	1.37	1.00	47	1.16	0.47
18	3.20	2.04	28	2.08	1.20	38	1.34	0.58	48	1.15	0.46
19	3.09	1.57	29	2.04	1.17	39	1.33	0.57	49	1.13	0.45
20	3.00	1.52	30	2.00	1.15	40	1.30	0.56	50	1.12	0.44

HOSPITAL DEPARTMENT SURGEONS

LOCATION	NAME	TITLE
San Francisco	Dr. W. W. Washburn	Chief Surgeon
San Diego	Dr. T. F. O'Connell	District Physician and Surgeon
San Diego	Dr. Jerome F. Smith	District Physician and Surgeon
San Diego	Dr. W. H. Geistweit, Jr.	Oculist and Aurist
San Diego	Dr. G. P. Lauren	Oculist
National City	Dr. Joseph Weinberger	Dermatologist
Tijuana	Dr. T. N. Lococo	District Physician and Surgeon
Tecate	Dr. A. M. Reyes	District Physician and Surgeon
El Centro	Dr. Manuel V. Aguilar	District Physician and Surgeon
El Centro	Dr. F. W. Peterson	District Physician and Surgeon
El Centro	Dr. B. E. Schoensee	District Physician and Surgeon
Calexico	Dr. Richard Maddux	District Physician and Surgeon
Mexicali	Dr. M. P. Ajalat	District Physician and Surgeon
Mexicali	Dr. Mario Flores	District Physician and Surgeon
Mexicali	Dr. Gaston H. Salazar	District Physician and Surgeon

HOSPITALS

GENERAL HOSPITAL.....SAN FRANCISCO, CALIF.

MERCY HOSPITAL.....HILLCREST DRIVE, SAN DIEGO, CALIF.

SPECIAL INSTRUCTIONS

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains, in miles per hour, as shown below must not be exceeded, and must be further reduced as prescribed by speed boards or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
					RUNNING FORWARD	RUNNING BACKWARD
MP	MP	Column:	1	2	3	4
EASTWARD, MARKET ST. TO						
EL CENTRO, Except			40	30	30	25
0.41 to	0.94		20	20	20	20
0.94 to	0.96 (5th Ave.)		15	15	15	15
0.96 to	2.55		20	20	20	20
2.84 to	2.85 (28th St.)		20	20	20	20
3.25 to	3.42 (interlocking)		20	20	20	20
4.60 to	5.23 (National City)		20	20	20	20
7.35 to	7.36 (crossing)		15	15	15	15
11.10 to	11.11 (Palm Ave.)		30	30	30	25
KP	KP					
16.21 to	16.43 (curve)		30	20	20	20
17.32 to	17.82 (curves)		20	15	15	15
35.70 to	36.70 (curve)		35	25	25	25
37.93 to	38.23 (curve)		35	25	25	25
40.07 to	40.69 (curve)		35	25	25	25
40.69 to	41.73 (curve)		25	20	20	20
51.36 to	51.73 (curve)		35	25	25	25
51.84 to	52.47 (curve)		35	25	25	25
64.44 to	65.32 (curves)		35	25	25	25
66.15 to	66.61 (curve)		35	25	25	25
66.61 to	67.03 (curve)		30	20	20	20
67.03 to	67.36 (curve)		25	20	20	20
67.36 to	67.71 (curve)		30	20	20	20
67.71 to	68.02 (curve)		35	25	25	25
68.11 to	68.42 (curve)		35	25	25	25
68.63 to	68.87 (curve)		35	25	25	25
70.60 to	71.31 (curves)		35	25	25	25
MP	MP					
60.39 to	60.66 (curve)		25	20	20	20
61.12 to	61.28 (curve)		30	20	20	20
61.28 to	61.53 (curve)		35	25	25	25
62.86 to	63.35 (curve)		35	25	25	25
63.67 to	63.90 (curve)		25	20	20	20
64.54 to	64.81 (curve)		25	20	20	20
64.81 to	65.03 (curve)		35	25	25	25
65.17 to	65.53 (curve)		30	20	20	20
68.33 to	68.67 (curve)		35	25	25	25
70.41 to	70.75 (curve)		25	20	20	20
71.05 to	71.18 (curve)		35	25	25	25
72.76 to	73.08 (curve)		35	25	25	25
73.74 to	73.94 (curve)		25	20	20	20
73.94 to	74.28 (curve)		35	25	25	25
76.09 to	76.35 (curve)		25	20	20	20
76.65 to	76.78 (curve)		25	20	20	20
79.60 to	80.64 (curve)		30	20	20	20

TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
					RUNNING FORWARD	RUNNING BACKWARD
MP	MP	Column:	1	2	3	4
WESTWARD, EL CENTRO TO						
MARKET ST., Except			40	30	30	25
114.56 to	114.11 (curve)		30	20	20	20
112.67 to	112.11 (curve)		30	20	20	20
106.71 to	99.07 (Carriso Gorge)		15	15	15	15
99.07 to	98.46 (Carriso Gorge)		10	10	10	10
98.46 to	96.60 (Carriso Gorge)		15	15	15	15
96.60 to	92.90 (Jacumba)		35	25	25	25
92.90 to	92.16		30	20	20	20
92.16 to	91.98 (curve)		25	20	20	20
91.98 to	88.86		30	20	20	20
88.86 to	88.64 (curve)		25	20	20	20
88.64 to	84.50 (Hipass)		30	20	20	20
84.50 to	82.06		35	25	25	25
82.06 to	81.78 (curve)		30	20	20	20
81.78 to	80.64		35	25	25	25
80.64 to	79.60 (curves)		30	20	20	20
79.60 to	76.78		35	25	25	25
76.78 to	76.65 (curve)		25	20	20	20
76.65 to	76.35		35	25	25	25
76.35 to	76.09 (curve)		25	20	20	20
76.09 to	73.94		35	25	25	25
73.94 to	73.76 (curve)		25	20	20	20
73.76 to	70.75		35	25	25	25
70.75 to	70.41 (curve)		25	20	20	20
70.41 to	65.53		35	25	25	25
65.53 to	65.17 (curve)		30	20	20	20
65.17 to	64.81		35	25	25	25
64.81 to	64.54 (curve)		25	20	20	20
64.54 to	63.90		35	25	25	25
63.90 to	63.67 (curve)		25	20	20	20
63.67 to	61.28		35	25	25	25
61.28 to	61.12 (curve)		30	20	20	20
61.12 to	60.66		35	25	25	25
60.66 to	60.39 (curve)		25	20	20	20
60.39 to	59.94		35	25	25	25
KP	KP					
71.41 to	67.65		35	25	25	25
67.65 to	67.36 (curve)		30	20	20	20
67.36 to	67.03 (curve)		25	20	20	20
67.03 to	66.61 (curve)		30	20	20	20
66.61 to	59.90 (Tecate)		35	25	25	25
54.00 to	41.73		35	25	25	25
41.73 to	40.69 (curve)		25	20	20	20
40.69 to	33.90 (Redondo)		35	25	25	25
17.82 to	17.32 (curves)		20	15	15	15
16.43 to	16.21 (curve)		30	20	20	20

(Continued on Page 9)

SPEED RESTRICTIONS FOR TRAINS: Maximum speed of trains, in miles per hour, as shown below must not be exceeded, and must be further reduced as prescribed by speed boards or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
					RUNNING FORWARD	RUNNING BACKWARD
MP	MP	Column:	1	2	3	4
EASTWARD, MARKET ST. TO EL CENTRO (Continued), Except			40	30	30	25
81.78 to	82.06 (curve)		30	20	20	20
84.50 to	88.64		30	20	20	20
88.64 to	88.86 (curve)		25	20	20	20
88.86 to	91.98		30	20	20	20
91.98 to	92.16 (curve)		25	20	20	20
92.16 to	92.90 (Jacumba)		30	20	20	20
92.90 to	96.60		35	25	25	25
96.60 to	98.46 (Carriso Gorge)		15	15	15	15
98.46 to	99.07 (Carriso Gorge)		10	10	10	10
99.07 to	106.71 (Carriso Gorge)		15	15	15	15
106.71 to	112.11		35	20	20	20
112.11 to	112.67 (curve)		30	20	20	20
112.67 to	114.11		35	20	20	20
114.11 to	114.56 (curve)		30	20	20	20
114.56 to	122.50 (Coyote Wells)		35	20	20	20
EASTWARD, TWELFTH ST. NATIONAL CITY TO K ST., CHULA VISTA, Except			..	10	10	10
6.02 to	7.40 (F St. Jct.)		..	15	15	15
EASTWARD, F ST. JCT. TO NORTH ISLAND, Except			..	15	15	15
19.43 to	21.31		..	12	12	12
EASTWARD, EIGHTH ST. TO EL CAJON, Except			..	15	15	15
over 13th and 16th St. crossings			..	10	10	10
over 28th, 30th and 32nd St. crossings			..	5	5	5
4.60 to	7.30		..	10	10	10
11.90 to	12.50		..	10	10	10
16.60 to	17.22		..	10	10	10

TERRITORY			PASSENGER TRAINS	FREIGHT AND MIXED	LIGHT ENGINES	
					RUNNING FORWARD	RUNNING BACKWARD
MP	MP	Column:	1	2	3	4
WESTWARD, EL CENTRO TO MARKET ST. (Continued), Except			40	30	30	25
11.11 to	11.10 (Palm Ave.)		30	30	30	25
7.36 to	7.35 (crossing)		15	15	15	15
5.23 to	4.60 (National City)		20	20	20	20
3.42 to	3.25 (interlocking)		20	20	20	20
2.85 to	2.84 (28th St.)		20	20	20	20
2.55 to	0.96		20	20	20	20
0.96 to	0.94 (5th Ave.)		15	15	15	15
0.94 to	0.41		20	20	20	20
WESTWARD, K ST., CHULA VISTA TO TWELFTH ST. NATIONAL CITY, Except			..	10	10	10
7.40 to	6.02		..	15	15	15
WESTWARD, NORTH ISLAND TO F ST. JCT., Except			..	15	15	15
21.31 to	19.43		..	12	12	12
WESTWARD, EL CAJON TO EIGHTH ST., Except			..	15	15	15
17.22 to	16.60		..	10	10	10
12.50 to	11.90		..	10	10	10
7.30 to	4.60		..	10	10	10
over 32nd, 30th and 28th St. crossings			..	5	5	5
over 16th and 13th St. crossings			..	10	10	10

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other tracks, wyes, balloon tracks, crossovers and turnouts, except;	10
With DERS class engines	6

SPEED RESTRICTIONS FOR ENGINES: Maximum speed shown below is subject to further restrictions applicable to certain territories as shown in Speed Restrictions for Trains:

NOMINAL CLASS	RUNNING FORWARD		RUNNING BACKWARD WITH TRAIN OR LIGHT
	WITH TRAIN	LIGHT	
C	30	30	25
DERS	40	30	25
T	40	30	25
Any engine not listed	30	30	25

Steam or Diesel engines when operated in backward motion must not exceed 25 MPH on all curves and 20 MPH when approaching highway or street crossings at grade.

Steam engines coupled tender to tender must not exceed speed permitted same engines running light backward.

Maximum speed of engines under following conditions, running under own steam, or hauled in train:

When all weight has been removed from any one pair of drivers	20 MPH
When all weight has been removed from only one wheel of any pair or drivers	30 MPH
When engine truck is removed	20 MPH
When main rod only is removed	30 MPH
When side rod only is removed	30 MPH
When both main and side rods are removed	20 MPH

Dead or disabled engines, and equipment which requires movement at reduced speed must first be reported as ready to move to the chief train dispatcher, who will designate the train in which the engine or equipment is to be moved. Such engine or equipment must not be handled in train until train-order designating maximum speed is issued.

Maximum speed of trains handling dead engines of S or SE class 20 MPH; other steam engines 30 MPH; and Diesel engines the speed shown for same engine running forward light.

Movement of foreign line engines, in service or dead in train, must not be authorized until provisions of current Line Clearance Circular have been complied with.

When train-order is received indicating that main track is out of service and that trains are to be detoured through a siding or other track, or over a shoofly, necessitating a reduction in normal train speed, signal 16(f) must be sounded on passenger trains one mile before reaching point where train must reduce speed, which must be acknowledged by whistle signal 14(g).

Maximum speed of trains handling locomotive crane, 20 MPH.

All cars handled in passenger trains must be equipped with steel-tired or all-steel wheels. Cars not so equipped must move in freight trains, passengers if any, to move on passenger trains.

Freight cars must not be handled behind occupied passenger carrying cars, except in mixed trains in military or naval movements.

Baggage, express, mail, refrigerator or other head-end cars must not be handled on rear of passenger trains unless trainmen can pass through them.

WATCH INSPECTORS

C. D. Fabrin, Manager of Time Service.....San Francisco
San Diego.....R. C. Wilson, 523 B St.
El Centro.....J. L. Bledsoe

LOCATION OF STANDARD CLOCKS

San Diego.....8th St. Train Order Office
San Diego.....Roundhouse
San Ysidro.....Train Order Office
El Centro.....Train Order Office

RATING OF ENGINES
In Units of 1000 pounds (Ms)

Engine No.	Nominal Class	Official Class			Garcia to Redondo .9% Grade	Redondo to Hipass 1.4% Grade	Plaster City to Coyote Wells .9% Grade	Coyote Wells to Hipass 2.2% Grade	.4% Grade	Level Track
26, 27	T-57,58	T-63	21/26	141-S	2300	1350	2300	830	4350	12200
50	C-30	C-50	20/24	122	2050	1200	2050	760	3800	10600
2311 to 2362	T-28,31	T-63	22/28	162-S	2900	1700	2900	1050	5450	15250
2363 to 2384	T-32,40	T-69	23/28	174-S						
5216, 5217	DERS-4	DERS-42	12¾ x 15½	328	4700	3100	4700	1950	8900	10000

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

SPEED RESTRICTIONS FOR ENGINES: Maximum speed shown below in addition to further restrictions applicable to certain operations as shown in Speed Restrictions for Trains:

ENGINE CLASS	RUNNING FORWARD		ARRIVAL, DEPARTURE AND RUNNING THROUGH YARDS
	WITH TRAIN	LIGHT	
D	30	30	25
[illegible]	40	30	40
[illegible]	40	40	40
Any engine not listed	30	30	25

Steam or Diesel engines when operated in backward motion must not exceed 20 MPH on all curves and 30 MPH when approaching highway at street crossings at grade.

Steam engines coupled tender to tender must not exceed speed permitted under engines running light backward.

Maximum speed of engines under following conditions, running under own steam, or hauled in train:

When all weight has been removed from any one pair of drivers	20 MPH
When all weight has been removed from only one wheel of any pair or drivers	30 MPH
When engine truck is removed	20 MPH
When main rod only is removed	40 MPH
When side rod only is removed	30 MPH
When both main and side rods are removed	20 MPH

Dead or disabled engines, and equipment which requires movement at reduced speed must be reported as ready to move to the Chief Train Dispatcher, who will designate the train in which the engine or equipment is to be moved. Such engine or equipment must not be coupled to train until conductor designating maximum speed is located.

Maximum speed of trains handling dead engines of E or EE class 25 MPH; other steam engines 30 MPH; and Diesel engines the speed shown for same engine running forward light.

Movement of foreign line engines, in service or dead in train, must not be authorized until provisions of current Safe Clearance Circular have been complied with.

When train-radio is reserved indicating that main track is out of service and that trains are to be diverted through a siding or other track, or over a shoofly, accompanying a notation in special train-speed, Overall 10(f) must be repeated on passenger trains one mile before reaching point where train must reduce speed, which must be acknowledged by vehicle signal 34(g).

Maximum speed of trains handling locomotive cranes, 45 MPH.

All cars handled in passenger trains must be equipped with [illegible] or air-line wheels. Cars not so equipped must not be [illegible], passengers if any, to carry on passenger trains.

Persons who must not be familiar behind passenger cars, except in actual cases of military or naval necessity.

Baggage cabins, mail, refrigerator or other [illegible] not be handled on rear of passenger trains unless [illegible] through them.

WATCH INSPECTORS

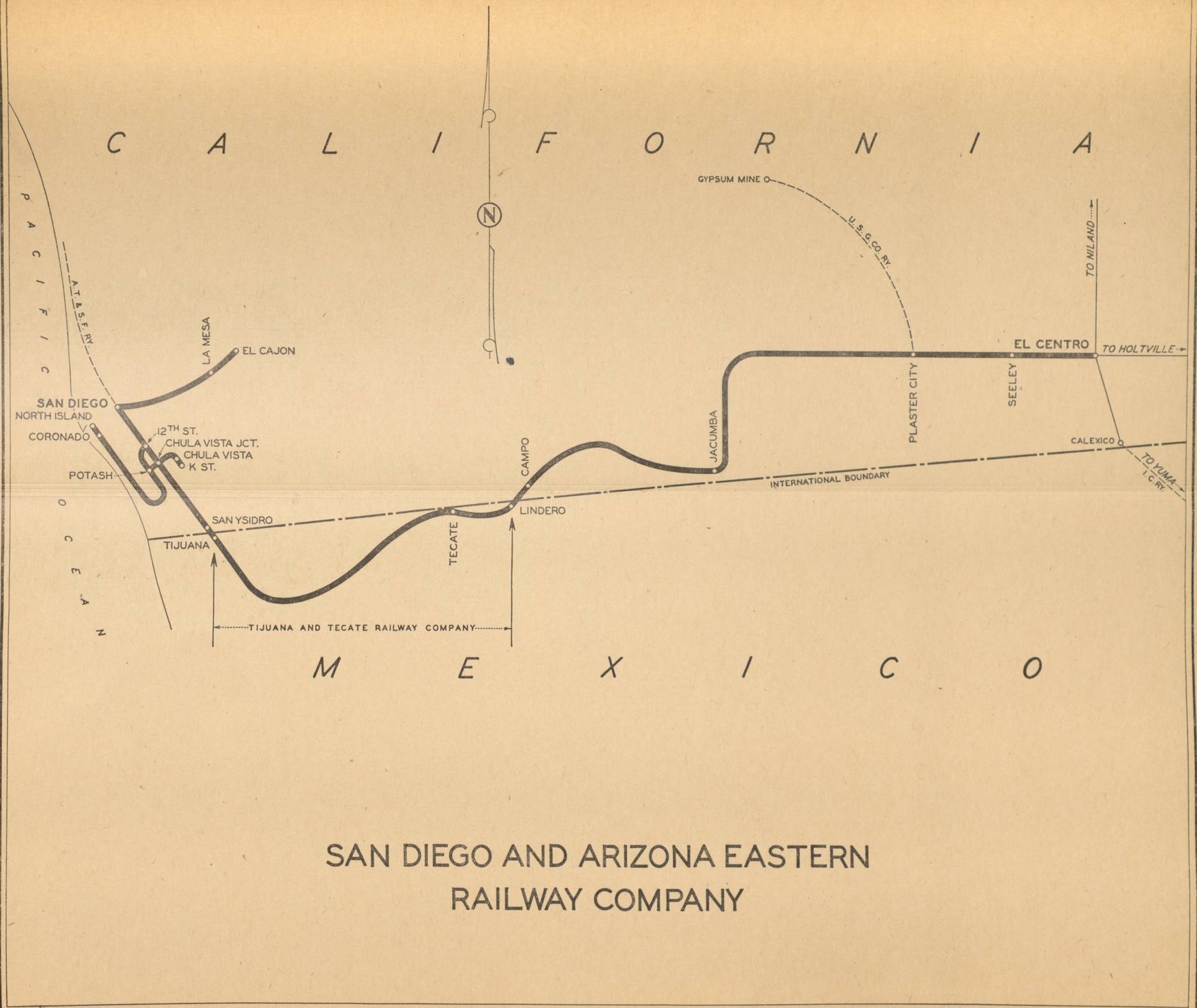
C. O. Fabris, Manager of Time Service ..... Post Office
San Diego ..... R. C. Wilson, Jr.
El Centro ..... E. [illegible]

LOCATION OF STANDARD CLOCKS

San Diego	9th St. Train Order Office
San Diego	Passenger Station
San Ysidro	Depot
El Centro	Depot

RATING OF ENGINES
In Units of 1000 pounds (Mv)

Engine No.	Series	Type	Cyls. & Dia. of Cylinders	Factor "C"	Power Rtg. Tons on Grade	Speed Rtg. MPH		
					2% Grade	1% Grade	0% Grade	1% Grade
36, 37	T-27-SE	T-30	[illegible]	[illegible]	2300	1150	2300	820	4750	1900
40	C-630	C-630	[illegible]	122	2090	1300	2630	750	3800	1040
2251 to 2262	T-25-M	T-45	[illegible]	[illegible]	2800	1700	3200	1000	4450	1830
2263 to 2284	T-27-M	T-36	[illegible]	[illegible]						
4710, 4717	DH16-4	DH16-4	[illegible]	[illegible]	4700	5100	4700	1800	9000	3400



SAN DIEGO AND ARIZONA EASTERN RAILWAY COMPANY